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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,355

09/11/2003

Mark F. Kelcourse

17988

7884

26794

7590

03/19/2008

TYCO TECHNOLOGY RESOURCES  
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WILMINGTON, DE 19808-2952

EXAMINER

GUZMAN, APRIL S

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

03/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/660,355	<b>Applicant(s)</b> KELCOURSE, MARK F.	
	<b>Examiner</b> APRIL S. GUZMAN	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,7,9-17,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,9-17,19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/11/2003, 11/04/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The Examiner acknowledges the receipt of the Applicant's amendment filed on 02/07/2008. **Claims 1, 3, 4, 6, 7, 9-17, 19, and 20** are still currently pending in the present application.

Applicant's request for reconsideration of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

Applicant's arguments, with respect to the rejection(s) of claim(s) 1, 3, 4, 6, 7, 9-17, 19, and have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a double patenting rejection is made in view of **copending Application No. 10/737,375 Kelcourse et al. (U.S. Patent Application Publication # 2004/0141470 A1)**.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

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application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 3, 6, 9-16, & 19** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 3, 9, 12-16, 18-20, and 23 of copending Application No. 10/737,375**.

**Claim 3** of copending Application No. 10/737,375 claims exactly the same limitations of claim 3 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 9** of copending Application No. 10/737,375 claims exactly the same limitations of claim 6 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 12** of copending Application No. 10/737,375 claims exactly the same limitations of claim 9 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 13** of copending Application No. 10/737,375 claims exactly the same limitations of claim 10 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 14** of copending Application No. 10/737,375 claims exactly the same limitations of claim 11 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 15** of copending Application No. 10/737,375 claims exactly the same limitations of claim 12 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 16** of copending Application No. 10/737,375 claims exactly the same limitations of claim 13 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 18** of copending Application No. 10/737,375 claims exactly the same limitations of claim 14 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 19** of copending Application No. 10/737,375 claims exactly the same limitations of claim 15 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 20** of copending Application No. 10/737,375 claims exactly the same limitations of claim 16 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claim 23** of copending Application No. 10/737,375 claims exactly the same limitations of claim 19 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 4, 7, 17, and 20** are provisionally rejected under 35 U.S.C. 103(a) as being obvious over **copending Application No. 10/737,375** which has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application.

Consider **claim 1**, Kelcourse et al. teach a single-die integrated circuit for switching among a plurality of transmission ports and a plurality of receiver ports (see claim 1), comprising:

a transmitter switching section having a plurality of transmission ports, the transmitter switching section operable to switch a selected one of the plurality of transmission ports to a transmission node (see claim 1); and

a receiver switching section having a plurality of receiver ports, the receiver switching section operable to switch a selected one of the plurality of receiver ports to the transmission

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node, wherein the receiver switching section includes at least two cascaded stages, a first cascaded stage controllable to switch the transmission node to a receiver node, and a second cascaded stage controllable to switch the receiver node to a selected one of the plurality of receiver ports (see claim 1 and claim 2).

Consider **claim 4, as applied to claim 1 above**, Kelcourse et al. further teach wherein, for each transmission port, the transmitter switching section includes a series field effect transistor (FET) switching topology comprising a plurality of transistors with their current paths coupled in series between an associated transmission port and the transmission node (see claim 4 and claim 5).

Consider **claim 7**, Kelcourse et al. further teach a single-die multiband switch for wireless communication (see claim 10 and claim 11), comprising:

an antenna port (see claim 10 and claim 11);

a plurality of transmitter ports, for each transmitter port a switching topology operable to switch the last said transmitter port to the antenna port (see claim 10 and claim 11); and

a plurality of receiver ports, for each receiver port a switching topology operable to switch the last said receiver port to the antenna port (see claim 10 and claim 11);

wherein at least one of the switching topologies comprising a plurality of field effect transistors having their current paths coupled in series between an associated transmission port and the antenna port, a control signal for the at least one switching topology controlling the at least one switching topology to selectively connect or isolate a respective transmitter port from the antenna port (see claim 10 and claim 11).



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Consider **claim 17**, Kelcourse et al. further teach a method of switching one of a plurality of transmitters and a plurality of receivers to a transmitter/receiver antenna (see claim 21 and 22), comprising the steps of:

connecting each transmitter to a respective one of a plurality of transmitter ports formed on a single integrated circuit die (see claim 21 and 22);

connecting each receiver to a respective one of a plurality of receiver ports formed on the die (see claim 21 and 22);

controlling a selected one of a plurality of switching topologies each associated with a respective one of the transmitter and receiver ports to connect a respective selected one of the transmitter and receiver ports to an antenna port formed on the die (see claim 21 and 22);

controlling other ones of the switching topologies to isolate other of the transmitter and receiver ports from the antenna port (see claim 21 and 22);

arranging at least some of the switching topologies in cascaded stages including a first stage coupled to the antenna port and a last stage coupled to a plurality of transmitter or receiver ports (see claim 21 and 22);

connecting a selected one of the transmitter or receiver ports to the antenna port by switching on the first stage and switching on a switch associated with the selected one of the transmitter or receiver ports wherein the switch associated with the selected one of the transmitter or receiver ports is a portion of the last stage (see claim 21 and 22); and

switching off the remaining switching topologies and other switches in the last stage (see claim 21 and 22).

Consider **claim 20, as applied to claim 1 above**, Kelcourse et al. further teach wherein the first cascaded stage comprises at least one first transistor having a current path coupled between the transmission node and an intermediate node and the second cascaded stage comprising at least one second transistor for each of the receiver ports, said transistor of each of the receiver ports having a current path coupled between the intermediate node and the corresponding receiver node, wherein the at least one transistor has a gate perimeter that is about twice the gate perimeter of at least one of the second transistors ([0021], [0028]-[0029], [0039], and [0041]-[0042]).

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. This rejection might also be overcome by showing that the copending application is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of References Cited.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450

Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A.S.G/asg

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/A. S. G./

Examiner, Art Unit 2618

/Lana N. Le/

Acting SPE of Art Unit 2618